

SECTION I

CATALOGUE NUMBER: 60-18610-002
 PRODUCT NAME: MITSUBISHI SLM ETCHING SOLUTION - SLM-OH
 MANUFACTURER: FR Chemicals 524 South Columbus Avenue Mt. Vernon, New York 10550
 PRODUCT INFORMATION: (914)-667-1002
 EXPOSURE or ACCIDENT EMERGENCY (24 HOUR): CHEMTREC (800) 424-9300

MSDS REVISED AS OF: 06/01/90

** THIS PRODUCT CONTAINS TOXIC CHEMICAL(S) SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF THE EMERGENCY PLANNING AND COMMUNITY RIGHT TO KNOW ACT OF 1986 AND OF 40 CFR 372. SEE SECTION II.

SECTION II: COMPONENT AND REGULATORY INFORMATION

COMPONENTS & (REGULATORY LISTS)	CAS REG. NO.	OSHA PEL	ACGIH TLV	% WT.
Water	7732-18-5	N/A	N/A	60-100
Denatured Ethanol	64-17-5	(TWA) 1000 ppm	(TWA) 1000 ppm	15-40
** Ethylene Glycol (C)	107-21-1	N/A	(TWA) 50 ppm *	7-13
Polyethylene Glycol 400	25322-88-3	N/A	N/A	7-13

* CEILING VALUE (TWA) - TIME WEIGHTED AVERAGE N/A - NOT APPLICABLE

REGULATORY LISTS FOR APPLICABLE COMPONENTS

- A - CERCLA HAZARDOUS SUBSTANCE LIST
- B - SARA TITLE III EXTREMELY HAZARDOUS SUBSTANCE LIST (SECTION 302)
- C - SARA TITLE III TOXIC CHEMICAL LIST (SECTION 313)
- D - CALIFORNIA (PROP. 65) LIST OF CANCER CAUSING SUBSTANCES
- E - RESOURCE CONSERVATION AND RECOVERY ACT HAZARDOUS WASTE LIST

SECTION III: PHYSICAL DATA

pH: 5.4
 SPECIFIC GRAVITY: 0.97
 BOILING POINT: Approx. 185 F.
 % VOLATILITY: 60-100
 APPEARANCE AND ODOR: Clear, slightly cloudy solution, alcohol odor.

SOLUBILITY IN WATER: Completely soluble.
 EVAPORATION RATE: Not Available
 VAPOR PRESSURE: Not Available
 VAPOR DENSITY: Not Available

SECTION IV: FIRE AND EXPLOSION DATA

FLASH POINT (METHOD USED): 80.6 F (Closed Cup Method)
 FLAMMABLE LIMITS - LEL: 4.3 UEL: 19
 EXTINGUISHING MEDIA: Water or carbon dioxide.
 SPECIAL FIREFIGHTING PROCEDURES: Evacuate personnel to a safe area. Firefighters should wear self-contained breathing apparatus.
 UNUSUAL FIRE HAZARDS: Product susceptible to ignition.

SECTION V: REACTIVITY

STABILITY: Stable CONDITIONS TO AVOID: None
 INCOMPATIBILITY (AVOID): None
 HAZARDOUS DECOMPOSITION PRODUCTS: None
 POLYMERIZATION: Does not polymerize. CONDITIONS TO AVOID: None

SECTION VI: SPILL AND DISPOSAL INFORMATION

SPILLS

Use appropriate protective equipment. Dike the spill and soak up with absorbant material. Prevent liquid from entering sewers or waterways.

WASTE DISPOSAL

Discharge to sewer requires the approval of permitting authority and may require pretreatment. Incineration requires a permitted incinerator. Landfill disposal requires a permitted landfill. Treatment, storage, transportation, and disposal must be in accordance with Federal, State, and Local Regulations.

SECTION VII: HEALTH HAZARD AND FIRST AID INFORMATION

EXPOSURE EFFECTS:

EYE CONTACT: Eye discomfort with possible transient conjunctivitis. Serious corneal injury not anticipated. Minor irritation also possible.

SKIN CONTACT: No adverse effects from available information either through contact or absorption.

INGESTION: Abdominal discomfort or pain, dizziness, nausea, vomiting, decreased reaction, euphoria, lumbar pain, oliguria, central nervous system depression, and coma possible.

INHALATION: Mists may irritate the nose and throat. High vapor concentrations caused by heating in a poorly ventilated area may produce nausea, vomiting, headache, and dizziness.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: No medical conditions known to be aggravated by exposure to this product.

CARCINOGENICITY: None of the chemicals used in this product are listed on NTP, IARC, or OSHA listings of carcinogens.

FIRST AID:

EYE: Flush the eyes thoroughly with water. Obtain medical attention.

SKIN: Remove contaminated clothing and flush the exposed area with water.

INGESTION: If conscious, give 2 glasses of water. Do not induce vomiting. Obtain prompt medical attention.

INHALATION: Remove to fresh air. If discomfort persists contact a physician.

SECTION VIII: SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION: Use a NIOSH approved cartridge respirator in poorly ventilated areas.

VENTILATION RECOMMENDED: 10 room volumes per hour is adequate ventilation under normal conditions.

PROTECTIVE EQUIPMENT RECOMMENDED: Chemical splash goggles, latex or neoprene gloves, lab coat, and eye wash station.

SECTION IX: SPECIAL PRECAUTIONS

STORAGE AND HANDLING PRECAUTIONS: Store in a well ventilated area. Keep container tightly capped when not in use. Do not store food, drink, or tobacco in areas where contamination could occur with this product.

OTHER PRECAUTIONS: Avoid breathing vapors or mists. Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling. Do not take internally. Keep out of reach of children.

SECTION X: NEPA RATING

HEALTH - 2 FLAMMABILITY - 2 REACTIVITY - 0

SECTION XI: DOT INFORMATION

DOT SHIPPING NAME: Ethyl Alcohol Solution
HAZARD CLASS: Flammable Liquid
ID #: UN 1170


7/11/90